




Department of Energy

Washington, DC 20585

December 6, 2005

MEMORANDUM TO: Distribution

FROM: John Spitaleri Shaw
Assistant Secretary for
Environment, Safety and Health 

SUBJECT: Annual Pollution Prevention Award Nominations and
Pollution Prevention Performance Summaries

The purpose of this memorandum is to request your assistance in providing Best-in-Class selections for the Department of Energy (DOE) annual pollution prevention awards program pursuant to the *Greening the Government* Executive Orders 13101 and 13148. Under DOE Order 450.1, Program Offices and Administrations are to evaluate pollution prevention award nominations from sites under their purview and select Best-in-Class in each of the six award categories. The Office of Environment, Safety and Health (EH) is responsible under the Order for coordinating the DOE pollution prevention awards process and using your Best-in-Class selections to prepare the Department's entries to the White House Closing-the-Circle competition. Your Best-in-Class selections will also serve as entries for the *DOE P2 Star* awards that EH presented for the first time last year, and I am pleased to announce will continue this year in recognition of exemplary achievements in pollution prevention.

We have requested that your site pollution prevention coordinators (see attachment 1) provide you with their award nominations by December 23, 2005. Suggested criteria for selecting Best-in-Class projects and practices are provided for your use (see attachment 2). These criteria, which track closely with the White House Closing-the-Circle criteria, have also been provided to your coordinators for their use.

The annual pollution prevention awards program affirms the importance and benefits, both environmental and fiscal, of integrating pollution prevention into sites' operations through their environmental management systems. For a program-level perspective, I am pleased to also provide you with the attached pollution prevention performance summaries (see attachment 3). These summaries showcase your organization's performance over the previous year in preventing pollution and feature specific information on waste reduction and costs avoided, materials recycled, environmentally preferable purchasing accomplishments, and pollution prevention awards received.

Please notify Donald Lentzen of my staff (donald.lentzen@eh.doe.gov) of your Best-in-Class selections by **January 10, 2006**, so that we can meet the White House's deadline for submitting entries for the Closing-the-Circle competition. Furthermore, I plan to recognize your Best-in-Class selections as well as the *DOE P2 Star* awards selected by my office as part of the Department's Earth Day 2006 celebration.

Questions concerning the DOE pollution prevention awards program may be directed to Mr. Lentzen by e-mail or by telephone at (202) 586-7428.

Attachments (3)

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DOE POLLUTION PREVENTION AWARDS PROGRAM

“Best-in-Class” Selection Criteria

Program Offices and Administrations are offered the following criteria for selecting Best-in-Class from the nominations posted on the pollution prevention website (<http://www.eh.doe.gov/p2/p2awards/index.html>) by sites under their purview:

The nomination must:

- Specifically relate to one of the six award categories described in the Table below,
- Have been completed or performed in Fiscal Year 2005, and
- Meet one of the following criteria:
 - Has been funded by DOE; or
 - Has been funded under a contract or subcontract ultimately funded in large part by DOE; or
 - Has been funded under contract with or directly by another U.S. Government agency and have significant positive effects benefiting DOE.

**Table: 2006 DOE POLLUTION PREVENTION AWARD CATEGORIES AND
SUGGESTED BEST-IN CLASS SELECTION CRITERIA**

CATEGORY	DESCRIPTION	SELECTION CRITERIA
1.Green Purchasing	<p>This category recognizes the most effective and innovative programs implemented for the purchase and use of recycled content, environmentally preferable, or biobased products at a Federal site, facility, or operation. Preference will be given to nominations that include both purchasing of recycled content products and purchasing of other environmentally preferable including biobased products. For recycled content products, this award category focuses on, but is not limited to, those products designated in the Environmental Protection Agency Comprehensive Procurement Guidelines (CPG). For environmentally preferable products, this award category recognizes the best examples of acquiring, using, or validating products or services that have a reduced impact on human health and the environment when compared with competing products or services that serve the same purpose; an outstanding improvement to a process that resulted in significant monetary savings and benefit to the environment; or product testing that led to the approval and use of environmentally preferable products or services. Preference will also be given for outreach programs/projects or educational efforts designed to promote the green purchasing objectives of Executive Order (EO) 13101.</p>	<p>Positive changes made by the individual, team or site/facility program as evidenced by descriptions and supporting documentation with quantitative data (for example, the amount of toxic material or hazardous waste reduced, the increase in quantity and value of bio-based products purchased by the facility).</p>

CATEGORY	DESCRIPTION	SELECTION CRITERIA
2. Waste/Pollution Prevention	<p>This category recognizes source reduction practices related to the generation of wastes from a Federal site, facility, or operation through any change in the design, manufacturing, or use/reuse of materials or products; and/or the amount of toxicity in waste materials prior to recycling, treatment or disposal. Preference will be given to nominations that include outreach programs/projects or educational efforts designed to promote the pollution prevention and waste prevention goals and objectives of EO 13101 or EO 13148.</p>	<p>Positive changes made by the individual, team or site/facility program as evidenced by descriptions and supporting documentation with quantitative data (for example, the amount of waste reduced through the change).</p>
3. Recycling	<p>This category recognizes outstanding activities, including collection, separation, and processing by which products or other materials are recovered from the waste stream for use in the manufacture of new products (other than fuel for producing heat or power by combustion) at a Federal site, facility, or operation. Preference will be given for recycling programs that have an internal education component and/or a public outreach component designed to promote recycling at the site, facility, or operation or to promote partnerships with the surrounding community to promote recycling.</p>	<p>Positive changes made by the individual, team or site/facility program as evidenced by descriptions and supporting documentation with quantitative data (for example, the amount of waste reduced through recycling).</p>

CATEGORY	DESCRIPTION	SELECTION CRITERIA
4. Environmental Management System (EMS)	<p>This category recognizes the most effective and innovative programs to implement environmental management systems at Federal facilities in accordance with EO 13148 (and DOE Order 450.1).</p> <p>Implementation of Facility level environmental management systems shall include environmental goals including pollution prevention, and measurable objectives, and targets that are reviewed and updated as appropriate. The systems should also include a compliance component. This category also recognizes the use of quantitative or qualitative consideration of the full range (cradle to grave) of environmental costs and impacts of certain activities or procurement. The effort should include environmental consideration in either descriptive or accounting format of raw material derivations, use and disposal of final products services; material and energy usage and waste; environmental, health and safety management costs; or the use of environmental cost accounting (ECA) and life cycle assessment (LCA) in multiple types of decision-making.</p>	<p>Full integration of the EMS into the infrastructure and culture of the site/facility, including management performance, decision-making processes, and community involvement and outreach. Consideration should be given to looking for nominations that emphasize measured results, not simply effort, and represent clear examples of ongoing excellence in an active, implemented ECA/LCA system, or an outstanding project planned and implemented using ECA/LCA principles.</p>
5. Sustainable Design/Green Buildings	<p>This category recognizes innovative Federal projects employing sustainable design and green building principles. Nominations should be limited to projects that have been completed, are under construction, or have completed the planning process and have been awarded to a successful offeror. Nominations should address all facets of a structure or project's life cycle, e.g., project design, energy efficiency, and building operations. Each nomination should highlight the cost effective use of innovative techniques and solutions that utilize sustainable design principles in the planning, construction, and operation of Federal facilities.</p>	<p>Positive changes made by the individual, team or site/facility program as evidenced by descriptions and supporting documentation with quantitative data (for example, level of increase in energy efficiency, reduction in building operation costs, and/or use of environmentally preferable building materials).</p>

CATEGORY	DESCRIPTION	SELECTION CRITERIA
<p>6. Minimizing Petroleum Use in Transportation</p>	<p>This category recognizes programs, practices and procedures implemented in a Federal fleet that result in significant reduction in petroleum use. This includes establishment of new fuel infrastructure; methods for encouraging the use of alternative fuels; ride sharing programs; increased vehicle usage efficiency programs; hybrid vehicle or NEV acquisition and use; or any other methods your fleet uses to decrease its petroleum consumption. Preference will be given to nominations that demonstrate innovation in response to technical, logistical, financial and other hurdles and support the goals of EO 13149.</p>	<p>Preference will be given to nominations that demonstrate innovation in response to technical, logistical, financial and other hurdles and support the goals of EO 13149.</p>

Pollution Prevention Performance Summaries

- National Nuclear Security Administration
- Office of Science
- Office of Fossil Energy
- Office of Environmental Management
- Office of Nuclear Energy
- Office of Civilian Radioactive Waste Management

Office of Environment, Safety and Health
Summary of 2004 Pollution Prevention Performance for
National Nuclear Security Administration (NNSA)



AVOIDING WASTE / AVOIDING COST

Seven NNSA sites reported on 42 activities that eliminated or reduced waste as a result of integrating P2 into site operations.

These activities *avoided*:

12,560 metric tons of solid waste
158 metric tons of hazardous waste
306 cubic meters of low-level radioactive waste
and
>\$18 million in waste management/disposal costs

RECYCLING

NNSA sites reported recycling over **67,000** metric tons of material
20,471 metric tons reported by Y-12 (most of any DOE site)

POLLUTION PREVENTION AWARDS

Five NNSA sites nominated activities for P2 award consideration. NNSA selected twelve activities for EH submission to the White House "Closing the Circle" competition.

DOE P2 Star Award

- Lawrence Livermore National Laboratory: *Chemical Environmental Services' Low-Level Waste Stream Development*

White House "Closing the Circle" Award Honorable Mentions

- Pantex: *Environmental Partnerships*
- Sandia National Laboratories/NM: *Waste Reduction Techniques Applied to Landscaping*

DOE P2 Best-in-Class Awards

- Six NNSA Best-in-Class Designations
- Six NNSA Notable Practice Designations

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

Six sites achieved a 100% EPP purchase score:

Bettis Atomic Power Laboratory
Kansas City Plant
Knolls Atomic Power Laboratory
Lawrence Livermore National Laboratory
Los Alamos National Laboratory
Pantex Plant

>\$15 million in purchases of recycled-content products at ten NNSA sites.

Highlights:

NNSA has met 4 out of 5 DOE waste reduction goals to be achieved by the end of 2005.

Highlights:

NNSA sites have reported a 52% increase in recycling since 2000.

Highlights:

NNSA sites nominated 21 activities for P2 award consideration.

NNSA Service Center organized a successful DOE/NNSA Pollution Prevention Workshop in May 2005.

NNSA recognized 13 additional P2 projects with its own Environmental Stewardship Award.

Highlights:

NNSA accounted for over 50% of DOE's \$29.5 million in purchases of recycled-content products.



Office of Science (SC)

AVOIDING WASTE / AVOIDING COST

Six SC sites reported on 23 activities that eliminated or reduced waste as a result of integrating P2 into site operations.

These activities *avoided*:

6,756 metric tons of solid waste

25 metric tons of hazardous waste

50 cubic meters of hazardous waste

and

>\$6 million in waste management/disposal costs

Highlights:

Argonne National Laboratory avoided \$1 million in costs by reconfiguring and reusing spent uranium targets in the IPNS facility.

RECYCLING

SC sites reported recycling over **11,053** metric tons of material

Highlights:

ORNL's Biology Cleanout recycled 2,400 y³ of material and avoided replacement and disposal costs of \$275,000.

POLLUTION PREVENTION AWARDS

Six SC sites nominated 13 activities for P2 award consideration. SC selected nine of these for EH submission to the White House "Closing the Circle" competition.

DOE P2 Star Award

- Pacific Northwest National Laboratory: *Early Adopters Buy Bio: Greening Our Purchasing Systems*

DOE P2 Best-in-Class Awards

- Four SC Best-in-Class Designations
- Five SC Notable Practice Designations

Highlights:

PNNL won a P2 Star Award for integrating environmentally preferable purchasing, including biobased products, into its Environmental Management System.

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

Six SC sites achieved a 100% EPP purchase score:

Ames National Laboratory
Argonne National Laboratory
Brookhaven National Laboratory
Fermi National Accelerator Laboratory
Lawrence Berkeley National Laboratory
Princeton Plasma Physics Laboratory

>\$7 million in purchases of recycled-content products at ten Science sites.

Highlights:

SC accounted for almost 25% of DOE's \$29.5 million in purchases of recycled-content products.



Office of Fossil Energy (FE)

AVOIDING WASTE / AVOIDING COST

4 FE sites reported on 11 varied activities that eliminated or reduced waste as a result of integrating P2 into site operations.

Through reuse, recycling, or incorporating sustainable design principles in facility operations, FE sites are now able to avoid as much as **\$148,817,500** in costs, \$144 million of which would occur in the event of a full oil drawdown of the Strategic Petroleum Reserve (see box at right).

RECYCLING

FE sites reported recycling over **568** metric tons of material.

POLLUTION PREVENTION AWARDS

Two FE sites received awards for their P2 activities.

The **Strategic Petroleum Reserve** won the following awards for *Preventing Downstream Emissions through EMS and Sustainable Product Stewardship*:

- DOE P2 Star
- DOE P2 Best-in-Class
- White House Closing-the-Circle Honorable Mention

The **National Energy Technology Laboratory** received the following award for the *Green Fleet Team: Petroleum Fuel Reduction through Alternative Fuels*:

- DOE P2 Star

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

Three sites achieved a 100% EPP purchase score:

Albany Research Center
National Energy Technology Laboratory
Strategic Petroleum Reserve

>\$486,000 in purchases of recycled-content products at three reporting FE sites.

Highlights:

The degasification plant at the Strategic Petroleum Reserve (SPR) has been designed to eliminate emissions and costs that would occur in a full-scale drawdown:

- 77,000 tons of VOCs
- 283 tons of hydrogen sulfide
- 210 tons of benzene
- \$144 million

Highlights:

SPR avoided \$238,000 in labor and material costs by refurbishing a bridge that the Louisiana Army National Guard installed as a training exercise.

Highlights:

NETL-Pittsburgh increased its alternative fuel use by 20% over the previous year; all light duty vehicle acquisitions in 2004 were alternative, biobased fuel vehicles.

Highlights:

SPR switched lighting from a conventional battery system to solar lighting thereby eliminating 375 pounds of battery waste.

Office of Environment, Safety and Health Summary of 2004 Pollution Prevention Performance for



Office of Environmental Management (EM)

AVOIDING WASTE / AVOIDING COST

Six EM sites reported on 52 activities that eliminated or reduced waste as a result of integrating P2 into site operations.

These activities *avoided*:

3,783 metric tons of solid waste
64.9 metric tons of hazardous waste
147 cubic meters of low-level radioactive waste
and
>\$83 million in waste management/disposal costs

RECYCLING

EM sites reported recycling over **16,891** metric tons of material

POLLUTION PREVENTION AWARDS

Three EM sites nominated activities for P2 award consideration. EM selected six for EH submission to the White House "Closing the Circle" competition.

DOE P2 Star Award

- Savannah River Site - *New Market for Unserviceable Cargo Containers*
- Savannah River Site - *Green Fleet Team, Petroleum Fuel Reduction through Alternative Fuels*

DOE P2 Best-in-Class Awards

- Five EM Best-in-Class Designations
- One EM Notable Practice Designations

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

Six sites achieved a 100% EPP purchase score:

East Tennessee Technology Park
Fernald
Hanford
Santa Susanna
West Valley
Waste Isolation Pilot Plant

>\$4 million in purchases of recycled-content products at nine EM sites.

Highlights:

EM has met 3 out of 5 DOE waste reduction goals to be achieved by the end of 2005.

Highlights:

SRS recycled 2,710 metric tons of iron in 2004; this is over 16% of the material recycled by EM.

Highlights:

EM sites nominated 10 activities for P2 award consideration

SRS is one of three DOE sites that are members of the "Green Fleet Team" (NREL and NETL are the others).

Highlights:

EM accounted for over 15% of DOE's \$29.5 million in purchases of recycled-content products.



Office of Nuclear Energy (NE)

AVOIDING WASTE / AVOIDING COST

The Idaho National Engineering and Environmental Laboratory (INEEL) reported on 4 activities that eliminated or reduced waste as a result of integrating P2 into site operations.

These activities *avoided*:

450 metric tons of solid waste
15.7 metric tons of hazardous waste
14.5 cubic meters of low-level radioactive waste
and
>\$87,000 in waste management/disposal costs

Examples of activities that avoided waste are:

- Five sheets of lead from the DD&D of WRRTF reactor building were sent to the Nevada Test Site for reuse instead of being disposed of as hazardous waste. Due to the size of the lead sheets, they could not be sent to a lead recycler. The largest piece was a 9.5-foot square, clad in steel, weighing 34,500 lbs.
- A 200-ton compactor weighing 32,000 lbs. was sent to a waste processing facility in Oak Ridge, TN instead of being disposed of as low-level waste at the INEEL. Oak Ridge will use the compactor for volume reduction of low-level radioactive waste.

RECYCLING

INEEL reported recycling **6,476** metric tons of material

- NE is responsible for over 6% of material recycled at all DOE sites.

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

INEEL achieved a 100% EPP purchase score

- INEEL reported **\$1.3 million** in purchases of recycled-content products.

Highlights:

NE has met 3 out of 5 DOE waste reduction goals to be achieved by the end of 2005.

Highlights:

INEEL has reported a 15.5% increase in recycling since 2000

Highlights:

NE accounted for over 4% of DOE's \$29.5 million in purchases of recycled-content products



Office of Civilian Radioactive Waste Management (RW)

AVOIDING WASTE / AVOIDING COST

To continually improve environmental performance, the Yucca Mountain Project (YMP) site Environmental Management System (EMS) targeted the environmental aspect of hazardous material use and storage relative to pest control at its facilities. The existing pest control method was non-effective, expensive, and produced a waste chemical that needed to be managed and disposed.

A pollution prevention opportunity assessment (PPOA) identified an innovative, non-chemical, non-sonar, non-ultrasound pest control system that produces an intermittent signal in the electrical field around building wiring. The signal creates an irritating environment in the building's walls and ceilings for rats, mice, ants, and roaches.

The electronic technology eliminated the purchase, use, and storage of pest control chemicals at a savings of \$20,000.

POLLUTION PREVENTION AWARDS

RW-YMP received two DOE Best-in-Class awards:

- *Zapping Unwanted Pests Electronically*
- *Web-based Process Ensures Successful Implementation of EMS*

RECYCLING

RW-YMP reported recycling over **543** metric tons of material.

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP)

>**\$266,000** in purchases of recycled-content products.

Highlights:

This EMS-generated project also reduced the risk of mice-carried Hantavirus transmission by eliminating mice and their droppings from facilities without the use of toxic chemical pesticides.

Highlights:

The EMS is the vehicle sites use to integrate P2 into site operations. The Yucca Mountain Project developed a web-based EMS to provide general and specific information to all organizations responsible for its processes and procedures.